

**REMARKS**

This supplemental response provides additional grounds for allowance of claim 49, in addition to the claim amendments and grounds for patentability presented in the Amendment After Final submitted on April 23, 2004, and entered with the RCE filed on June 1, 2004.

The rejection of independent claim 49 as being anticipated by Yasui et al (U.S. Patent No. 5,248,963 – Yasui) is traversed.

Claim 49 is characterized in that when a signal is detected which turns off the power supply to the liquid crystal display main body, first and second periodic rectangular signals which are in phase and at the same voltage level are applied to the pixel electrodes and the opposite electrode for a certain period of time. The liquid crystal is instantly switched to an OFF state across the screen such that the whole display disappears, by applying the first and second periodic rectangular signals to the pixel electrodes and the opposite electrode (following a video signal).

Yasui teaches that when a turn off signal is detected, the gate bus driver is turned on to produce a HIGH output and a common electric potential is applied simultaneously to the display electrodes and the opposite electrode. Yasui aims to cause the pixel capacitors to quickly discharge after power off. Yasui discloses only the change of the gate bus driver output to HIGH and the application of the common electric potential (GND) to the display electrodes and the opposite electrode.

In Yasui, to apply the common electric potential (GND) to the display electrodes and the opposite electrode, a new circuit is needed which applies the common electric potential (GND) to all the source bus lines and the opposite electrode, and the circuit must be driven so that it applies the common electric potential (GND) to all the source bus lines and the opposite electrode after the detection of a power off.

In Yasui, two switch circuits are required, (as is shown in the attached figure), to erase the display through the application of the common electric potential (GND) to all the source bus lines and the opposite electrode. One of the switch circuits switches the display electrodes between the source bus driver output and the common electric potential (GND). The other switch circuit switches between the DC voltage E2 and the common electric potential. After power off, the display electrodes and the opposite electrode are connected to the common electric potential (GND) using these switches. In addition, the switches need to be driven so as to connect the display electrodes and the opposite electrode to the common electric potential (GND) after a power off.

Yasui has the following problems: (i) the circuits applying the common electric potential (GND) to all the source bus lines and the opposite electrode are newly provided to erase the display, which adds to the circuit complexity; and (ii) the circuits are driven to implement a display erase operation, so it takes time to erase the display.

In contrast to Yasui, claim 49 of this application is characterized that the liquid crystal is changed to OFF state across the screen by a process in which in the first and second periodic rectangular signals (in place of video signals) are applied, with no

KANBE et al  
Serial No. 10/091,321  
June 18, 2004

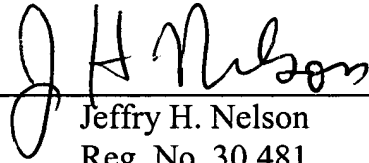
common electric potential (GND) applied to all the source bus lines and the opposite electrode unlike the reference.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone the undersigned. Prompt reconsideration and allowance of this application is requested.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: \_\_\_\_\_



Jeffrey H. Nelson  
Reg. No. 30,481

JHN:glf  
1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100